

Decbox A

RECEIVED

1644

APR 19 2000

PAGE: 1

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/232,290A

TECHCENTER 1600/2900
DATE: 03/30/2000
TIME: 13:25:08

Input Set: I232290A.RAW

This Raw Listing contains the General Information
Section and up to first 5 pages.

ENTERED

```

1  <110> APPLICANT: PLUCKTHUN, ANDREAS
2      NIEBA, LARS
3      HONEGGER, ANNEMARIE
4  <120> TITLE OF INVENTION: IMMUNOGLOBULIN SUPER FAMILY DOMAINS AND FRAGMENTS WITH
5      INCREASED SOLUBILITY
6  <130> FILE REFERENCE: MORPHO/7
7  <140> CURRENT APPLICATION NUMBER: US/09/232,290A
8  <141> CURRENT FILING DATE: 1999-01-15
9  <150> EARLIER APPLICATION NUMBER: PCT/EP96/02230
10 <151> EARLIER FILING DATE: 1996-05-23
11 <160> NUMBER OF SEQ ID NOS: 60
12 <170> SOFTWARE: PatentIn Ver. 2.0
13 <210> SEQ ID NO 1
14 <211> LENGTH: 113
15 <212> TYPE: PRT
16 <213> ORGANISM: Murine
17 <400> SEQUENCE: 1
18   Asp Ile Val Met Thr Gln Ser Pro Ala Ser Leu Val Val Ser Leu Gly
19       1           5           10           15
20   Gln Arg Ala Thr Ile Ser Cys Arg Ala Ser Glu Ser Val Asp Ser Tyr
21           20           25           30
22   Gly Lys Ser Phe Met His Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
23           35           40           45
24   Lys Val Leu Ile Tyr Ile Ala Ser Asn Leu Glu Ser Gly Val Pro Ala
25           50           55           60
26   Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr Leu Thr Ile Asp
27           65           70           75           80
28   Pro Val Glu Ala Asp Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Asn Asn
29           85           90           95
30   Glu Asp Pro Pro Pro Thr Phe Gly Ala Gly Thr Lys Leu Glu Met Arg
31           100          105          110
32   Arg
33 <210> SEQ ID NO 2
34 <211> LENGTH: 108
35 <212> TYPE: PRT
36 <213> ORGANISM: Murine
37 <400> SEQUENCE: 2
38   Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly
39       1           5           10           15
40   Glu Lys Val Thr Met Thr Cys Ser Ala Ser Ser Ser Val Tyr Tyr Met
41           20           25           30
42   Tyr Trp Tyr Gln Gln Lys Pro Gly Ser Ser Pro Arg Leu Leu Ile Tyr
43           35           40           45
44   Asp Thr Ser Asn Leu Ala Ser Gly Val Pro Val Arg Phe Ser Gly Ser

```

1644

APR 19 2000

PAGE: 2

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/232,290A

TECH CENTER 1600/2900
DATE: 03/30/2000
TIME: 13:25:08

Input Set: I232290A.RAW

```

45          50          55          60
46      Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Arg Met Glu Ala Glu
47          65          70          75          80
48      Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Tyr Pro Pro Ile
49          85          90          95
50      Thr Phe Gly Val Gly Thr Lys Leu Asp Leu Lys Thr
51          100          105
52 <210> SEQ ID NO 3
53 <211> LENGTH: 108
54 <212> TYPE: PRT
55 <213> ORGANISM: Murine
56 <400> SEQUENCE: 3
57      Asp Ile Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Val Ser Val Gly
58          1          5          10          15
59      Glu Thr Val Thr Ile Thr Cys Arg Ala Ser Glu Asn Ile Tyr Ser Asn
60          20          25          30
61      Leu Ala Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val
62          35          40          45
63      Tyr Ala Ala Thr Asn Leu Ala Asp Gly Val Pro Ser Arg Phe Ser Gly
64          50          55          60
65      Ser Gly Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Ser
66          65          70          75          80
67      Glu Asp Phe Gly Ser Tyr Tyr Cys Gln His Phe Trp Gly Thr Pro Tyr
68          85          90          95
69      Thr Phe Gly Gly Thr Arg Leu Glu Ile Lys Arg
70          100          105
71 <210> SEQ ID NO 4
72 <211> LENGTH: 113
73 <212> TYPE: PRT
74 <213> ORGANISM: Murine
75 <400> SEQUENCE: 4
76      Asp Val Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Ser Leu Gly
77          1          5          10          15
78      Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Ser
79          20          25          30
80      Asn Gly Asn Thr Tyr Leu His Trp Tyr Leu Gln Lys Pro Gly Gln Ser
81          35          40          45
82      Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
83          50          55          60
84      Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Tyr Leu Lys Ile
85          65          70          75          80
86      Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Phe Cys Ser Gln Ser
87          85          90          95
88      Thr His Val Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
89          100          105          110
90      Arg
91 <210> SEQ ID NO 5
92 <211> LENGTH: 106
93 <212> TYPE: PRT
94 <213> ORGANISM: Homo sapiens

```

PAGE: 3

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/232,290A

DATE: 03/30/2000
TIME: 13:25:08

Input Set: I232290A.RAW

```

95  <400> SEQUENCE: 5
96      Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val Gly
97      1              5              10              15
98      Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Arg Trp
99      20              25              30
100     Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Val Pro Lys Leu Leu Ile
101      35              40              45
102     Tyr Lys Ala Ser Ser Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
103      50              55              60
104     Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
105      65              70              75              80
106     Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn Ser Tyr Ser Phe
107      85              90              95
108     Gly Pro Gly Thr Lys Val Asp Ile Lys Arg
109      100              105
110  <210> SEQ ID NO 6
111  <211> LENGTH: 108
112  <212> TYPE: PRT
113  <213> ORGANISM: Murine
114  <400> SEQUENCE: 6
115     Asp Ile Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val Gly
116     1              5              10              15
117     Glu Thr Val Thr Ile Thr Cys Thr Ala Ser Gly Asn Ile His Asn Tyr
118     20              25              30
119     Leu Ala Trp Tyr Gln Gln Lys Gln Gly Lys Ser Pro Gln Leu Leu Val
120     35              40              45
121     Tyr Tyr Thr Thr Thr Leu Ala Asp Gly Val Pro Ser Arg Phe Ser Gly
122     50              55              60
123     Ser Gly Ser Gly Thr Gln Tyr Ser Leu Lys Ile Asn Ser Leu Gln Pro
124     65              70              75              80
125     Glu Asp Phe Gly Ser Tyr Tyr Cys Gln His Phe Trp Ser Thr Pro Arg
126     85              90              95
127     Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg
128     100              105
129  <210> SEQ ID NO 7
130  <211> LENGTH: 109
131  <212> TYPE: PRT
132  <213> ORGANISM: Murine
133  <400> SEQUENCE: 7
134     Glu Asn Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly
135     1              5              10              15
136     Glu Lys Val Thr Met Ala Cys Arg Ala Ser Ser Ser Val Ser Ser Thr
137     20              25              30
138     Tyr Leu His Trp Tyr Gln Gln Lys Ser Gly Ala Ser Pro Lys Leu Leu
139     35              40              45
140     Ile Tyr Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser
141     50              55              60
142     Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Tyr Ile Ser Ser Val Glu
143     65              70              75              80
144     Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Tyr Ser Gly Tyr Pro

```

PAGE: 4

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/232,290A

DATE: 03/30/2000
TIME: 13:25:08

Input Set: I232290A.RAW

```

145                                     85                               90                               95
146      Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Arg
147                                     100                               105
148 <210> SEQ ID NO 8
149 <211> LENGTH: 114
150 <212> TYPE: PRT
151 <213> ORGANISM: Murine
152 <400> SEQUENCE: 8
153      Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Thr Val Thr Ala Gly
154      1                               5                               10                               15
155      Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Phe Asn Ser
156      20                               25                               30
157      Gly Lys Arg Lys Asn Phe Leu Thr Trp Tyr His Gln Lys Pro Gly Gln
158      35                               40                               45
159      Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
160      50                               55                               60
161      Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
162      65                               70                               75                               80
163      Ile Thr Ser Val Gln Ala Glu Asp Leu Ala Ile Tyr Tyr Cys Gln Asn
164      85                               90                               95
165      Asp Tyr Ser His Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu
166      100                               105                               110
167      Lys Arg
168 <210> SEQ ID NO 9
169 <211> LENGTH: 108
170 <212> TYPE: PRT
171 <213> ORGANISM: Artificial Sequence
172 <220> FEATURE:
173 <223> OTHER INFORMATION: Description of Artificial Sequence: Humanized
174      murine
175 <400> SEQUENCE: 9
176      Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
177      1                               5                               10                               15
178      Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Val Asn Thr Ala
179      20                               25                               30
180      Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
181      35                               40                               45
182      Tyr Ser Ala Ser Phe Leu Glu Ser Gly Val Pro Ser Arg Phe Ser Gly
183      50                               55                               60
184      Ser Arg Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
185      65                               70                               75                               80
186      Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln His Tyr Thr Thr Pro Pro
187      85                               90                               95
188      Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
189      100                               105
190 <210> SEQ ID NO 10
191 <211> LENGTH: 112
192 <212> TYPE: PRT
193 <213> ORGANISM: Murine
194 <400> SEQUENCE: 10

```

PAGE: 5

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/232,290A

DATE: 03/30/2000
TIME: 13:25:08

Input Set: I232290A.RAW

```

195   Asp Ile Val Leu Thr Gln Ser Pro Gly Ser Leu Ala Val Ser Leu Gly
196       1             5             10             15
197   Gln Arg Ala Thr Ile Ser Cys Arg Ala Ser Gln Ser Val Asp Asp Asp
198       20             25             30
199   Gly Asn Ser Phe Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
200       35             40             45
201   Lys Leu Leu Ile Tyr Arg Ser Ser Asn Leu Ile Ser Gly Ile Pro Asp
202       50             55             60
203   Arg Phe Ser Gly Ser Gly Ser Arg Thr Asp Phe Thr Leu Thr Ile Asn
204       65             70             75             80
205   Asp Pro Val Glu Ala Asp Val Ala Thr Tyr Tyr Cys Gln Gln Ser Asn
206       85             90             95
207   Gln Asp Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Ile Lys Arg
208       100            105            110
209 <210> SEQ ID NO 11
210 <211> LENGTH: 111
211 <212> TYPE: PRT
212 <213> ORGANISM: Murine
213 <400> SEQUENCE: 11
214   Gln Ala Val Val Thr Gln Glu Ser Ala Leu Thr Thr Ser Pro Gly Glu
215       1             5             10             15
216   Thr Val Thr Leu Thr Cys Arg Ser Ser Thr Gly Ala Val Thr Thr Ser
217       20             25             30
218   Asn Tyr Ala Asn Trp Tyr Gln Glu Lys Pro Asp His Leu Phe Thr Gly
219       35             40             45
220   Leu Ile Glu Glu Thr Asn Asn Arg Ala Pro Gly Val Pro Ala Arg Phe
221       50             55             60
222   Ser Gly Ser Leu Ile Gly Asp Lys Ala Ala Leu Thr Ile Thr Gly Ala
223       65             70             75             80
224   Gln Thr Glu Asp Glu Ala Ile Tyr Phe Cys Ala Leu Trp Tyr Ser Asn
225       85             90             95
226   His Trp Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly
227       100            105            110
228 <210> SEQ ID NO 12
229 <211> LENGTH: 114
230 <212> TYPE: PRT
231 <213> ORGANISM: Murine
232 <400> SEQUENCE: 12
233   Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Thr Val Thr Ala Gly
234       1             5             10             15
235   Glu Lys Val Thr Met Ser Cys Thr Ser Ser Gln Ser Leu Phe Asn Ser
236       20             25             30
237   Gly Lys Gln Lys Asn Tyr Leu Thr Trp Tyr Gln Gln Lys Pro Gly Gln
238       35             40             45
239   Pro Pro Lys Val Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
240       50             55             60
241   Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
242       65             70             75             80
243   Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Asn
244       85             90             95

```

PAGE: 6

VERIFICATION SUMMARY
PATENT APPLICATION US/09/232,290A

DATE: 03/30/2000
TIME: 13:25:08

Input Set: I232290A.RAW

Line ? Error/Warning

Original Text
